

WHAT IS CLAIMED IS:

1. An actuator assembly for use in a data storage device comprising:  
an actuator arm configured to pivot about a z axis comprising:  
a fantail portion;  
an arm portion offset from the fantail portion in a direction  
parallel to the z axis; and  
a voice coil motor coil supported by the fantail portion and lying  
partially beneath the arm portion and at least partially in a  
plane parallel with the arm portion.
2. The actuator assembly of claim 1 wherein arm portion defines a first  
plane and the fantail portion defines a second plane, wherein the second  
plane and the plane of the voice coil motor coil are the same.
3. The actuator assembly of claim 2 wherein the first plane is  
approximately parallel to the second plane.
4. The actuator assembly of claim 1 wherein the arm portion further  
comprises a step portion connected to the fantail portion.
5. The actuator assembly of claim 4 wherein the step portion is curved.
6. The actuator assembly of claim 1 wherein the fantail portion  
comprises two side portions each having an inner surface supporting the  
voice coil motor coil and extending distally from the arm portion.
7. The actuator assembly of claim 6 further comprising a supporting  
layer between each of the inner surfaces and the voice coil motor coil, an

affixing layer between the voice coil motor coil and the arm portion, and a vertical layer between the voice coil motor coil and a pivot cartridge.

8. The actuator assembly of claim 7 wherein the supporting layers, the affixing layer, and the vertical layer comprise epoxy.
9. A disc drive comprising:  
a storage disc; and  
the actuator assembly of claim 1 positioned adjacent the storage disc.
10. An actuator assembly for use in a data storage device comprising:  
an arm portion; and  
means for supporting a voice coil motor coil at least partially  
beneath the arm portion.
11. The actuator assembly of claim 10 wherein the arm portion defines a first plane and the means for supporting the voice coil motor coil defines a second plane.
12. The actuator assembly of claim 11 wherein the first plane is approximately parallel to the second plane.
13. A method of manufacturing an actuator assembly for use in a storage device comprising the steps of:  
providing an actuator arm configured to pivot about a z axis, the actuator arm  
comprising an arm portion and a fantail portion offset from  
the arm portion in a direction parallel to the z axis; and

providing a voice coil motor coil supported by the fantail portion, the voice coil motor coil lying at least partially beneath the arm portion and at least partially in a plane parallel to the arm portion.

14. The method of claim 13 wherein the step of providing an actuator arm comprises forming the actuator arm by stamping.
15. The method of claim 13 wherein providing an actuator arm further comprises providing an arm portion defining a first plane and a fantail portion defining a second plane, wherein the second plane and the plane of the voice coil motor coil are the same.
16. The method of claim 15 wherein the first plane is approximately parallel to the second plane.
17. The method of claim 13 further comprising affixing the voice coil motor coil to the storage device.
18. The method of claim 17 wherein the affixing comprises providing an epoxy layer between the voice coil motor and each of the fantail portion, the arm portion, and a pivot cartridge.
19. A method of manufacturing a disc drive comprising the steps of:  
providing a storage disc;  
providing an actuator assembly manufactured by the method of claim 13 adjacent the storage disc.

20. The method of claim 19 wherein providing an actuator assembly further comprises:

providing the actuator assembly pivoting on a pivot mounted to a base; and

optimizing a position of a magnet relative to a pivot cartridge, the magnet underlying the voice coil motor coil.